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EXAMINER
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ART UNIT	PAPER NUMBER
2166	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/470,554	KERPELMAN ET AL.	
	Examiner	Art Unit	
	Robert W. Morgan	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-32 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-32 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 6,260,021 to Wong et al. in view of U.S. Patent No. 6,272,469 to Koritzinsky et al.

As per claim 1, Wong et al. teaches a method, for providing service data to medical diagnostic systems, the method comprising the steps of:

(a)—the claimed generating a diagnostic system service request for a designated diagnostic system coupled to an internal network of a medical diagnostic facility is met by the software used to process data and requests to the Picture Archival Communication (PAC) and Radiology (RI) system over the Intranet (36, Fig. 1) (see: column 3, lines 30-40), and

(b)—the claimed transmitting the request over an external network via a data communication control system coupled to a plurality of diagnostic systems over the internal network is met by the transmitting of received medical images request from network-attached (Internet/Intranet 36, Fig. 1) clients workstation (38, Fig. 1) (see: column 3, lines 61 to column 4, lines 15).

Wong et al. teaches a medical image distribution system using a medical image server (12, Fig. 1) and a plurality of network-attached (36, Fig. 1) client workstation (38, Fig. 1) for receiving and transferring medical images (see: column 3, lines 61 to column 4, lines 15).

Wong fails to explicitly teaches:

(b)—the claimed data communication control system coupled to a plurality of diagnostic systems;

(c)—the claimed receiving and processing the request at the remote service provider; and

(d)—the claimed transmitting a response from the remote service provider in response to the request.

Koritzinsky et al. teaches an approach to handling medical diagnostic and imaging system protocols through an interactive communications system linked to a centralized service facility using functional components (see: Fig. 4). These functional components along with other networks or communications schemes enable the service facility to communication and exchange data and messages with diagnostic systems and remote service units including outside Internet service providers (ISP's) (see: column 2, lines 39-41 and 54-57 and column 9, lines 11-33). In addition, Koritzinsky et al. also teaches a system controller (30, Fig. 1) that interactively exchanging service request and provide off and on-line service to diagnostic systems in response to the service request (see: column 4, lines 46-56 and column 6, lines 23-38).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to include the handling of medical diagnostic and imaging system protocols through an interactive communications system as taught by Koritzinsky et al. within the medical image distribution system as taught by Wong et al. with motivation of assisting the user with processing a service request, thereby providing a simpler and quicker way to access desired data over a network.

As per claim 2, Koritzinsky et al. teaches the claimed response is transmitted to the data communications control system. This feature is met by the system controller (30, Fig. 1) that interactively exchanging service request and provide off and on-line service to diagnostic systems in response to the service requests (see: column 4, lines 46-56 and column 6, lines 23-38).

As per claim 3, Wong et al. teaches the claimed step of transmitting the response to the designated diagnostic system via the internal network. This limitation is met by CORBA Image Interface Engine ("CIIE") that interfaces between the PAC system and medical image server (12, Fig. 1) through the Intranet/Internet including the capabilities of transmitting client images requests or responses (see: column 7, lines 38-51).

As per claim 4, Wong et al. teaches the claimed diagnostic system service request is generated at the designated diagnostic system. This feature is met by the network-attached client workstations configured with object-oriented graphical interface for receiving medical images requests from a user at a workstation (designated diagnostic system) (see: column 3, lines 61 to column 4, lines 2).

As per claim 5, Wong et al. teaches the network-attached client workstations configured with object-oriented graphical interface for receiving medical images requests from a user (see: column 3, lines 61 to column 4, lines 2).

Wong et al. fails to teach the diagnostic system service request is generated via an interface routine provided on the data communications control system.

Koritzinsky et al. teaches a system controller (30, Fig. 1) that interactively exchanging service request and provide off and on-line service to diagnostic systems in response to the service request (see: column 4, lines 46-56 and column 6, lines 23-38).

The obviousness of incorporating such a feature within the system of Wong et al. is as discussed above in the rejection of claim 1, and incorporated herein.

As per claim 6, Wong et al. teaches communications control system is configured to store and execute communications interface routines interactively with the client and the communications interface routines include a web browser routine (see: column 3, lines 42-52 and column 3, lines 61 to column 4, lines 15).

As per claim 7, Koritzinsky et al. teaches the claimed service request is generated at the data communications control system. This feature is met by the system controller (30, Fig. 1) that interactively exchanging service request and provide off and on-line service to diagnostic systems in response to the service request (see: column 4, lines 46-56 and column 6, lines 23-38).

As per claim 8, Wong et al. teaches the claimed service request includes at least data identifying the designated diagnostic system. This feature is met by the location data components that stores object identifiers and other data defining current physical location and message information regarding service requests from a workstation (30, Fig. 1) (see: column 7, lines 29-37 and column 13, lines 45-58).

As per claim 9, Wong et al. teaches the claimed step of accessing operational data from the designated diagnostic system in response to the service request (see: column 2, lines 38-51).

As per claim 10, Wong et al. teaches a medical image distribution system using a medical image server (12, Fig. 1) and a plurality of network (Internet/Intranet) -attached (36, Fig. 1) client workstation (38, Fig. 1) for receiving and transferring medical images requests (see: column 3, lines 61 to column 4, lines 15).

Wong et al. fails to teach the claimed service request is transmitted to the remote service provider via a first data communications medium and the response is transmitted to the medical diagnostic facility via a second data communications medium different from the first medium.

Koritzinsky et al. teaches an approach to handling medical diagnostic and imaging system protocols through an interactive communications system linked to a centralized service facility using functional components (see: Fig. 4). These functional components along with other networks or communications schemes enable the service facility to communication and exchange data and messages with diagnostic systems and remote service units including outside Internet service providers (ISP's) (see: column 2, lines 39-41 and 54-57 and column 9, lines 11-33). In addition, the Examiner considers the above-mentioned networks and other such networks including wide area network (WAN) and satellite links used for high-speed transmission data as obvious feature of this system.

The obviousness of incorporating such a feature within the system of Wong et al. is as discussed above in the rejection of claim 1, and incorporated herein.

As per claim 11, Wong et al. teaches the claimed first medium includes a wide area network link. This feature is met by the use of the Internet (36, Fig. 1) to transmit users requests.

As per claim 12, Wong et al. in combination with Koritzinsky et al. teaches a medical image distribution system using a medical image server (12, Fig. 1) and a plurality of network

(Internet/Intranet) -attached (36, Fig. 1) client workstation (38, Fig. 1) for receiving and transferring medical images requests (see: column 3, lines 61 to column 4, lines 15).

Wong et al. in combination with Koritzinsky et al. fails to teach the claimed second medium includes a satellite link.

Since, Wong et al. in combination with Koritzinsky et al. teaches the use of the Internet as a communication medium to receive and transmit medical images requests, the Examiner considers an addition of a satellite link as a second medium an obvious implementation to the system. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to include a satellite link as second medium of communication within the medical image distribution system as taught by Wong et al. in combination with medical diagnostic and imaging system protocols through an interactive communications system as taught by Koritzinsky et al. with motivation of allowing computers to readily exchange information with little error, thereby ensuring the accuracy of information being transmitted over a network.

As per claim 13, Koritzinsky et al. teaches the claimed response is transmitted directly to a diagnostic system (see: column 6, lines 23-38).

As per claim 14, Koritzinsky et al. teaches the claimed steps of placing the service request in a queue, and transmitting the service request in accordance with an established schedule (see: column 9, lines 46-51 and column 17, lines 19-25).

As per claim 15, Koritzinsky et al. teaches the claimed response includes service data for addressing an operational problem of the designated diagnostic system, and wherein the method

includes storing the service data for download to the designated diagnostic system (see: column 12, lines 58 to column 13, lines 22).

Claims 16-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,272,469 to Koritzinsky et al. in view of U.S. Patent No 6,260,021 to Wong et al.

As per claim 16, Koritzinsky et al. teaches a method for servicing a plurality of medical diagnostic systems, the method comprising the steps of:

(b)—the claimed accessing system data useful in addressing the service request is met (see: column 6, lines 23-49);

(c)—the claimed transmitting the service request to a remote service provider via a data communications control system, (d) processing the request at the remote service provider and (e) transmitting a service response from the remote service provider to the data communications control system . These features are met by an interactive communications system linked to a centralized service facility using functional components (see: Fig. 4). These functional components along with other networks or communications schemes enable the service facility to communication and exchange data and messages with diagnostic systems and remote service units including outside Internet service providers (ISP's) (see: column 2, lines 39-41 and 54-57 and column 9, lines 11-33). In addition, Koritzinsky et al. also teaches a system controller (30, Fig. 1) that interactively exchanging service request and provide off and on-line service to diagnostic systems in response to the service request (see: column 4, lines 46-56 and column 6, lines 23-38).

Koritzinsky et al. fails to teach:

(a) the claimed generating a service request for designated diagnostic system of a plurality of diagnostic systems coupled to an internal network of a medical diagnostic facility.

Wong et al. teaches software used to process data and requests to the Picture Archival Communication (PAC) and Radiology (RI) system over the Intranet (36, Fig. 1) (see: column 3, lines 30-40).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to include the software of the medical image distribution system as taught by Wong et al. within the handling of medical diagnostic and imaging system protocols through an interactive communications system as taught by Koritzinsky et al. with motivation of assisting the user with processing a service request, thereby providing a simpler and quicker way to access desired data over a network.

As per claim 17, Koritzinsky et al. teaches the claimed service request is generated at the designated diagnostic system. This feature is met by the network-attached client workstations configured with object-oriented graphical interface for receiving medical images requests from a user at a workstation (designated diagnostic system) (see: column 3, lines 61 to column 4, lines 2).

As per claim 18, Koritzinsky et al. teaches the claimed system data is stored at the diagnostic system (see: column 12, lines 58 to column 13, lines 22).

As per claim 19, Koritzinsky et al. teaches the claimed system data is accessed by the data communications control system and transmitted to the remote service provider. This limitation is met by an interactive communications system linked to a centralized service facility using functional components (see: Fig. 4). These functional components along with other

networks or communications schemes enable the service facility to communication and exchange data and messages with diagnostic systems and remote service units including outside Internet service providers (ISP's) (see: column 2, lines 39-41 and 54-57 and column 9, lines 11-33). In addition, Koritzinsky et al. also teaches a system controller (30, Fig. 1) that interactively exchanging service request and provide off and on-line service to diagnostic systems in response to the service request (see: column 4, lines 46-56 and column 6, lines 23-38)

As per claim 20, Koritzinsky et al. teaches the claimed system data is transmitted with the service request (see: column 4, lines 13-18 and column 5, lines 41-43).

As per claim 21, Koritzinsky et al. teaches the claimed system data is transmitted after the service request and in response to a prompt from the remote service provider. This limitation is met by an interactive communications system linked to a centralized service facility using functional components (see: Fig. 4). These functional components along with other networks or communications schemes enable the service facility to communication and exchange data and messages with diagnostic systems and remote service units including outside Internet service providers (ISP's) (see: column 2, lines 39-41 and 54-57 and column 9, lines 11-33).

As per claim 22, Koritzinsky et al. teach the claimed service request and the response are transmitted via different data communications media. This feature is met by handling medical diagnostic and imaging system protocols through an interactive communications system linked to a centralized service facility using functional components (see: Fig. 4). These functional components along with other networks or communications schemes enable the service facility to communication and exchange data and messages with diagnostic systems and remote service units including outside Internet service providers (ISP's) (see: column 2, lines 39-41 and 54-57

and column 9, lines 11-33). In addition, the Examiner considers the above-mentioned networks and other such networks including wide area network (WAN) and satellite links used for high-speed transmission data as obvious feature of this system.

As per claim 23, Wong et al. teaches the claimed step of forwarding the response to the designated diagnostic system via the internal network. This limitation is met by CORBA Image Interface Engine ("CIIE") that interfaces between the PAC system and medical image server (12, Fig. 1) through the Intranet/Internet with the capabilities to transmit client images requests or responses (see: column 7, lines 38-51).

As per claim 24, Koritzinsky et al. teaches the claimed diagnostic systems include at least two imaging systems of different modalities (see: column 4, lines 19-30).

As per claim 25, Koritzinsky et al. teaches a system for providing remote service to a plurality of networked medical diagnostic systems, the system comprising:

--the claimed plurality of medical diagnostic systems coupled to an internal network of a medical diagnostic facility, including designated diagnostic system is met by the each diagnostic system (12, Fig. 1) connected to the service facility via a network (80, Fig. 2) (see: column 6, lines 50-56); and

--the claimed service request generating circuit for formulating a service request for addressing an operation of the designated diagnostic system (see: column 12, lines 58 to column 13, lines 22).

Koritzinsky et al. teaches an approach to handling medical diagnostic and imaging system protocols through an interactive communications system linked to a centralized service facility using functional components (see: Fig. 4). These functional components along with other

networks or communications schemes enable the service facility to communication and exchange data and messages with diagnostic systems and remote service units including outside Internet service providers (ISP's) (see: column 2, lines 39-41 and 54-57 and column 9, lines 11-33). In addition, Koritzinsky et al. also teaches a system controller (30, Fig. 1) that interactively exchanging service request and provide off and on-line service to diagnostic systems in response to the service request (see: column 4, lines 46-56 and column 6, lines 23-38).

Koritzinsky et al. fails to explicitly teach the claimed data communications control system coupled to the internal network and to an external network for transmitting the service request to a remote service provider and for receiving a response to the request from the remote service provider.

Wong et al. teaches a medical image distribution system using a medical image server (12, Fig. 1) and a plurality of network-attached (Internet/Intranet 36, Fig. 1) client workstation (38, Fig. 1) for receiving and transferring medical images (see: column 3, lines 61 to column 4, lines 15).

The obviousness of incorporating such a feature within the system of Wong et al. is as discussed above in the rejection of claim 1, and incorporated herein.

As per claim 26 Koritzinsky et al. teaches the claimed remote service provider, the remote service provider receiving the service request, generating the response, and transmitting the response to the data communications control system. This feature is met by handling medical diagnostic and imaging system protocols through an interactive communications system linked to a centralized service facility using functional components (see: Fig. 4). These functional components along with other networks or communications schemes enable the service facility to

communication and exchange data and messages with diagnostic systems and remote service units including outside Internet service providers (ISP's) (see: column 2, lines 39-41 and 54-57 and column 9, lines 11-33). In addition, Koritzinsky et al. also teaches a system controller (30, Fig. 1) that interactively exchanging service request and provide off and on-line service to diagnostic systems in response to the service request (see: column 4, lines 46-56 and column 6, lines 23-38).

As per claim 27, Koritzinsky et al. teaches an approach to handling medical diagnostic and imaging system protocols through an interactive communications system linked to a centralized service facility using functional components (see: Fig. 4). These functional components along with other networks or communications schemes enable the service facility to communication and exchange data and messages with diagnostic systems and remote service units including outside Internet service providers (ISP's) (see: column 2, lines 39-41 and 54-57 and column 9, lines 11-33). In addition, the Examiner considers the above-mentioned networks and other such networks including wide area network (WAN) and satellite links used for high-speed transmission data as obvious feature of this system.

Koritzinsky et al. fails to explicitly teach the claimed control system includes an external network interface for receiving the response via at least two different data communications media.

Wong et al. teaches a medical image distribution system using a medical image server (12, Fig. 1) and a plurality of network-attached (Internet/Intranet 36, Fig. 1) client workstation (38, Fig. 1) for receiving and transferring medical images as well as disturbing medical images from one or more storage systems (see: column 3, lines 61 to column 4, lines 15).

The obviousness of incorporating such a feature within the system of Wong et al. is as discussed above in the rejection of claim 1, and incorporated herein.

As per claim 28, Koritzinsky et al. teaches the claimed service request is generated at the designated diagnostic system (see: column 4, lines 36-41).

As per claim 29, Koritzinsky et al. teaches the claimed diagnostic systems include at least two imaging systems of different modalities, and wherein the designated diagnostic system is selected from the at least two imaging systems (see: column 4, lines 19-30).

As per claim 30, Koritzinsky et al. teaches the claimed operational data useful in responding to the service request is stored at the designated diagnostic system (see: column 12, lines 58 to column 13, lines 22).

As per claim 31, Koritzinsky et al. teaches a system controller (30, Fig. 1) that interactively exchanging service request and provide off and on-line service to diagnostic systems in response to the service request (see: column 4, lines 46-56 and column 6, lines 23-38).

Koritzinsky et al. fails to teach the claimed access to the operational data from the designated diagnostic system via the internal network.

Wong et al. teaches a medical image distribution system using a medical image server (12, Fig. 1) and a plurality of network-attached (Internet/Intranet 36, Fig. 1) client workstation (38, Fig. 1) for receiving and transferring medical images as well as disturbing medical images from one or more storage systems (see: column 3, lines 61 to column 4, lines 15).

The obviousness of incorporating such a feature within the system of Wong et al. is as discussed above in the rejection of claim 1, and incorporated herein.

As per claim 32, Koritzinsky et al. teaches the claimed data communications control system includes an operator interface, and wherein the service request is generated via the operator interface. This limitation is met by the system controller (30, Fig. 1) that interactively exchanges service requests with the service facility (22, Fig. 1) using an operation station (34, Fig. 1) including computer monitor (36, Fig. 1), a keyboard (38, Fig. 1) as well as other input devices (40, Fig. 1) (see: column 4, lines 53-62).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

In related art (5,867,821) Ballantyne et al. discloses a method an apparatus used for distribution and administration of medical services to a patient's individual electronic patient care station.

In related art (6,353,445) Babula et al. provides a user interface to interactively exchanging service data between medical diagnostic systems and remote field service facilities.

In related art (5,586,262) Komatsu et al. discloses an imaging system in a hospital with picture memory in which medical picture data of patient are stored.

In related art (6,006,191) DiRienzo provides a system for transmitting, storing, retransmitting and receiving electronic medical images.

In related art (Medical imaging a slow operation: Majority of health-care filed still grappling over basic technology issues) Picarille discuss hospital using high-tech imaging technology such as radiology images, patient records and hospital administrative data available over a network.

In related art (5,867,821) Ballantyne et al. teaches a method and apparatus used for distribution and administration of medical services and electronic medical records to a patient's individual electronic patient care station.

In related art (From PACS to the World Wide Web) Ratib discloses new imaging techniques and the increasing proportion of medical imaging modalities that generate images in digital form with the development of digital image management.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Morgan whose telephone number is 703-605-4441. The examiner can normally be reached on 8:30 a.m. - 5:00 p.m. Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on 703-305-9588. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

rwm
March 9, 2002

JOSEPH THOMAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100